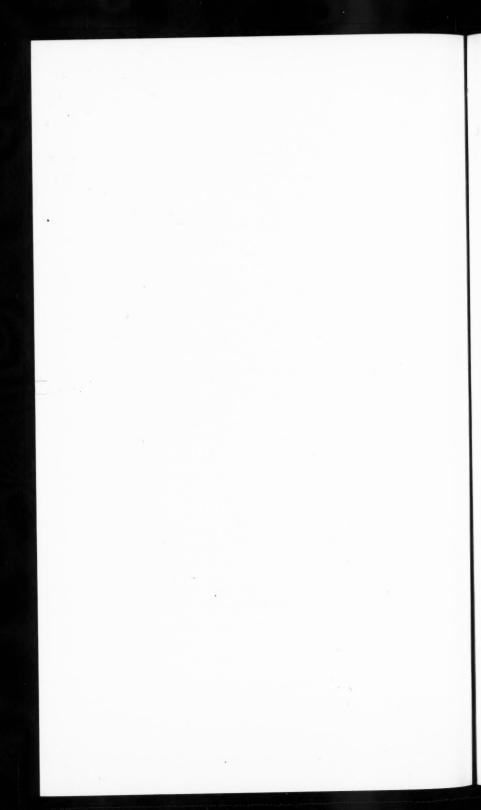
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# Proceedings of the American Academy of Arts and Sciences

Vol. 81, No. 7, p. 299-327, July, 1952

SUMMER NUMBER

# RECORDS OF MEETINGS FROM OCTOBER 1951 TO MAY 1952



# American Academy of Arts and Sciences OFFICERS AND COMMITTEES FOR 1952-1953

#### President EDWIN H. LAND

Vice-P	resi	dents
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Class I

Class II

JEROME C. HUNSAKER

ALFRED S. ROMER

Class III ERWIN D. CANHAM

Class IV WALLACE GOODRICH \*

Secretary HENRY B. PHILLIPS

Treasurer HORACE S. FORD

Editor

Librarian ERNEST H. HUNTRESS

TAYLOR STARCK

Executive Officer RALPH W. BURHOE

#### Councillore

Councillors					
Class I		Class II			
EDWIN H. LAND	Terms expire 1953	Francis O. Schmitt			
FRED L. WHIPPLE	Terms expire 1954	MARTIN J. BUERGER			
HAROLD L. HAZEN	Terms expire 1955	KENNETH V. THIMANN			
JOHN T. EDSALL	Terms expire 1956	FRANCIS M. RACKEMANN			

Class III		Class IV
W. RUPERT MACLAURIN	Terms expire 1953	GEORGE W. SHERBURN
MARK DEW. HOWE	Terms expire 1954	WILLARD V. O. QUINE
CARL J. FRIEDRICH	Terms expire 1955	JOSEPH HUDNUT
CHESTER M. ALTER	Terms expire 1956	HUGH HENCKEN

#### STANDING COMMITTEES

#### The House Committee

JOHN B. WILBUR ( -1953), Chairman

PHILIPPE E. LECORBEILLER ( -1954)

HENRY R. VIETS ( -1955)

#### The Committee on Membership

EDWIN H. LAND. Chairman, ex officio

EDWIN	11. LAND, Chairman, ex o	nicvo
Class I WILLIAM H. MCADAMS	Terms expire 1953	Class II Alden B. Dawson
EDWARD M. PURCELL	Terms expire 1954	JAMES M. FAULKNER
Class III Zechariah Chafee, Jr.	Terms expire 1953	Class IV Bartlett H. Hayes

Walter M. Whitehill Terms expire 1954 Mason Hammond

<sup>\*</sup>Died June 6, 1952.

### The Committee on Meetings

EDWIN H. LAND, Chairman, ex officio

HENRY B. PHILLIPS, Secretary, ex officio

#### Class I

JEROME C. HUNSAKER, ex officio BART J. BOK (-1954)

#### Class II

Alfred S. Romer, ex officio Roy G. Hoskins (-1954)

#### Class III

MARK DEW. HOWE (-1953) ERWIN D. CANHAM, ex officio

#### Class IV

HENRY J. CADBURY (-1953) WALLACE GOODRICH,\* ex officio

#### The Committee on Finance

HORACE S. FORD, Chairman, ex officio

RALPH E. FREEMAN (-1953)

THOMAS D. САВОТ ( -1954)

Francis C. Gray (-1953)

RALPH LOWELL ( -1954)

#### The Auditing Committee

THOMAS H. SANDERS (-1953)

Візнор С. Нилт ( -1954)

#### The Committee on Publication

TAYLOR STARCK, Chairman, ex officio

#### Class I

PHILIPP G. FRANK (-1954)

#### Class II

Frank M. Carpenter ( -1954)

#### Class III

JOHN E. BURCHARD (-1953)

#### Class IV

WILBUR K. JORDAN ( -1953)

#### The Permanent Science Fund Committee

HUDSON HOAGLAND ( -1953), Chairman

HELEN M. CAM (-1954) GUSTAVUS J. ESSELEN (-1953) Donald H. Menzel ( -1954)

CHESTER S. KEEFER ( -1955)

JOHN L. ONCLEY ( -1955) REED C. ROLLINS ( -1955)

### The Rumford Committee

GEORGE R. HARRISON ( -1953), Chairman

Daniel F. Comstock (-1954)

NORMAN F. RAMSEY (-1955)

ARTHUR C. HARDY ( -1954) JOSEPH H. KEENAN ( -1954) Francis O. Schmitt (-1953)

GEORGE WALD ( -1955)

<sup>\*</sup> Died June 6, 1952.

# The C. M. Warren Committee

#### EDWIN R. GILLILAND ( -1955), Chairman

110 11 111 141 01111111111	( 1000), 011411 111411
EDWIN J. COHN ( -1954)	EUGENE M. LANDIS (-1954)
ROBERT H. COLE ( -1955)	AVERY A. MORTON ( -1953)
Louis F. Fieser ( -1954)	WALTER C. SCHUMB ( -1953)

# The Amory Prize Committee

#### EDWIN B. WILSON, Chairman

WILLIAM B. CASTLE	GREGORY PINCUS	GEORGE B.	WISLOCKI
ROY G. HOSKINS	GEORGE W. THORN	S. Burt	WOLBACH

# The Nominating Committee

#### HARLOW SHAPLEY, Chairman

Class I	Class II
Julius A. Stratton (-1953)	Paul C. Mangelsdorf (-1953)
Charles D. Coryell (-1954)	Hudson Hoagland (-1954)
HARLOW SHAPLEY ( -1955)	CLIFFORD FRONDEL (-1955)
Class III	Class IV
Douglass V. Brown (-1953)	EDWARD A. WEEKS, JR. (-1953)
ZECHARIAH CHAFEE, JR. (-1954)	WILBUR K. JORDAN (-1954)
ROBERT B. STEWART ( -1955)	WILLIAM F. TWADDELL ( -1955)

# SPECIAL COMMITTEES ACTIVE DURING 1952-1953

# Committee for the Conference on Climatic Variations

#### HARLOW SHAPLEY, Chairman

Elso S. Barghoorn	,	HELMUT LANDSBERG
COLUMBUS O'D. ISELIN		HURD C. WILLETT

#### Committee for the Conference on Totalitarianism

#### CARL J. FRIEDRICH, Chairman

ERWIN D. CANHAM			MERLE FAINSOD
KARL W. DEUTSCH		ALEXANDER	GERSCHENKRON
	HAROLD D.	LASSWELL	

# Committee on International Relations

JOHN	T	EDS ALT.	Chairman	

double at another, chair man	
MARK DEW. Howe (resigned May, 1952)	TAYLOR STARCK
PAUL M. DOTY	HENRY R. VIETS
BART J. Bok (appointed May, 1952)	

# Committee on Planning and Development

EDWIN H. LAND, Chairman

MASON HAMMOND MILTON E. LORD RALPH LOWELL GEORGE C. SHATTUCK

# Committee on School Science

FRANCIS BITTER, Chairman

JOHN E. BURCHARD CHARLES D. CORYELL MASON HAMMOND KENNETH V. THIMANN

#### Committee on Science and Values

GEORGE WALD, Chairman

PHILIPP FRANK ROY G. HOSKINS HENRY A. MURRAY HENRY B. PHILLIPS
LASZLO TISZA
ROBERT ULICH

## Committee on Policy on Membership and Dues

GEORGE R. HARRISON, Chairman

CHESTER M. ALTER HORACE S. FORD HAROLD L. HAZEN HARLOW SHAPLEY

KENNETH V. THIMANN

#### Committee on Unity of Science

PHILLIP FRANK, Chairman

PERCY W. BRIDGMAN HUDSON HOAGLAND CHARLES MORRIS HARLOW SHAPLEY
B. F. SKINNER
S. S. STEVENS

# RECORDS OF MEETINGS

# October 10, 1951 - Stated Meeting

The One Thousand Three Hundred and Fifty-second Meeting of the Academy convened in its House on October 10, 1951, and was called to order by the President at 8:30 P.M.

There were present sixty-five Fellows and ninety-three guests.

The records of the Meeting of May 9 were approved as

published.

The Secretary reported that the Council had approved a grant of \$500 from the Rumford Fund, and nine grants from the

Permanent Science Fund totaling \$9,065.

Recently elected Fellows were introduced as follows: Caryl Parker Haskins (III:3) by H. Shapley; Chia-Chiao Lin (I:1) by E. Reissner; Egon Orowan (I:4) by C. R. Soderberg; Norman Foster Ramsey (I:2) by J. H. Van Vleck; John Clark Sheehan (I:3) by A. C. Cope; Nathan Bill Talbot (II:4) by J. H. Means.

The following communication was presented:

David F. Edwards: Should an Old New England Company, Making Heavy Textile Machinery, Rebuild Its Plants in New England or in the Carolinas?

The meeting was dissolved at 10:30 P.M.

# November 14, 1951 - Stated Meeting

The One Thousand Three Hundred and Fifty-third Meeting of the Academy convened in its House on November 14, 1951, and was called to order by the President at 8:27 P.M.

There were present forty-two Fellows and forty-one guests. The records of the Meeting of October 10 were read and

approved.

Recently elected Fellows were introduced as follows: William Phelps Allis (I:2) by N. H. Frank; Harvey Brooks (I:2) by F. V. Hunt; Filmer Stuart Cuckow Northrop (IV:1) by W. V. O. Quine; William Prager (I:2) by C. R. Adams.

Mr. Joseph H. Keenan, Academy delegate to the celebration of the 500th Anniversary of the University of Glasgow, gave a re-

port of the occasion.

Introduced by Mr. Shapley, Chairman of the Rumford Committee, Herbert E. Ives, the Rumford medalist for 1951, received at the hand of the President the Rumford gold and silver medals for his noteworthy contributions to optics.

The following communication was presented:

Herbert E. Ives: Adventures with Standing Light Waves.

The meeting was dissolved at 9:34 P.M.

# December 12, 1951 - Stated Meeting

The One Thousand Three Hundred and Fifty-fourth Meeting of the Academy convened in its House on December 12, 1951, and was called to order by the President at 8:30 P.M.

There were present thirty-five Fellows and fifty guests.

The records of the Meeting of November 14 were read and approved.

Recently elected Fellows were introduced as follows: Paul Mead Doty (I:3) by J. L. Oncley; Philippe Emmanuel LeCorbeiller (I:2) by E. L. Chaffee; Abram L. Sachar (III:4) by L. Carmichael; Walter Muir Whitehill (III:4) by K. D. Metcalf.

The following communication was presented:

Professor I. Bernard Cohen: Benjamin Franklin, a Newtonian Experimental Scientist.

The meeting was dissolved at 9:50 P.M.

# January 9, 1952 - Stated Meeting

The One Thousand Three Hundred and Fifty-fifth Meeting of the Academy convened in its House on January 9, 1952, and was called to order by the President at 8:20 p.m.

There were present forty-three Fellows and twenty-four guests.

The records of the Meeting of December 12, 1951, were read and approved.

Recently elected Fellows were introduced as follows: Elizabeth Sprague Coolidge (IV:4) by Wallace Goodrich; William C. Boyd (I:3) by John T. Edsall.

The following communication was presented:

Mr. James M. Barker: The Middle East, Geographical Solar Plexus.

The meeting was dissolved at 10 P.M.

# February 13, 1952 - Stated Meeting

The One Thousand Three Hundred and Fifty-sixth Meeting of the Academy convened in its House on February 13, 1952, and was called to order by the President at 8:15 P.M.

There were present fifty-four Fellows.

The records of the Meeting of January 9, 1952, were read and approved.

The following recently elected Fellow was introduced: William M. Rand (III:4) by George B. Kistiakowsky (I:3).

The Secretary reported that the Council, at its meeting this afternoon, recommended amending the Statutes in order to revise the classification of membership, and gave notice that these amendments would be presented for action at the March meeting.

Mr. Taylor Starck (IV:4) reported on the annual meeting of

the American Council of Learned Societies.

Messrs. W. G. Constable (IV:4) and Charles D. Coryell (I:3), official delegates, reported on the Third National Conference on UNESCO conducted by the United States National Commission for UNESCO. Messrs. Bartlett Hayes (IV:4) and Bart J. Bok (I:1) reported further, informally.

The remainder of the meeting was devoted to a discussion of Academy policy led by President Land.

The meeting was dissolved at 10:30 P.M.

# March 12, 1952 - Stated Meeting

The One Thousand Three Hundred and Fifty-seventh Meeting of the Academy convened in its House on March 12, 1952, and was called to order by the President at 8:20 p.m.

There were present thirty Fellows and fifty-one guests.

The records of the Meeting of February 13, 1952, were read and approved.

Upon motion by Mr. Whittlesey, it was voted to table action on the proposed amendments to the Statutes on the membership classification until another meeting.

Upon recommendation by the Council it was voted that the assessment for the fiscal year beginning April 1, 1952, be \$15 for Resident Fellows and \$7.50 for Non-Resident Fellows.

Upon recommendation of the Council it was voted that the following appropriations be made for the fiscal year beginning April 1, 1952:

#### A. From the General Funds:

1.	Salaries, Pensions and Annuities	\$15,577
2.	General Office and Meeting Expense	7,075
3.	House Maintenance	10,050
4.	President's Expense	300
5.	Treasurer's Expense	800
6.	Committee on International Relations	500
7.	Committee on School Science	500

#### B. From the Restricted Funds:

1.	Amory Fund Committee	\$ 100
2.	Permanent Science Fund Committee	40,000
3.	Committee on Publication	7,000
4.	Rumford Fund Committee	5,000
5.	Committee on the Unity of Science	2,271.69
6.	Warren Fund Committee	3,000

\$57,871.69 \$92,673.69

Honored guests of the Academy, the twenty-five New England winners and honorable mentions of the current National Science Talent Search, were introduced by President Land.

Mr. John Welsh, Chairman of the Committee on School Science, introduced Mr. Elbert C. Weaver, of Phillips Academy, Andover, Massachusetts, the recipient of the Academy's first award for outstanding science teaching in the secondary schools of New England. President Land tendered the award of \$100 and a citation recognizing Mr. Weaver's "distinguished service in the classroom and of his nationwide activities for the improvement of science instruction."

The following communication was presented:

George R. Harrison: The Role of the Secondary School in the Teaching of Science.

The meeting was dissolved at 9:45 P.M.

# April 9, 1952 - Stated Meeting

The One Thousand Three Hundred and Fifty-eighth Meeting of the Academy convened in its House on April 9, 1952, and was called to order by the President at 8:20 P.M.

There were present fifty-five Fellows and twenty-seven guests. The records of the Meeting of March 12, 1952, were read and approved.

The Secretary reported that the Council had reviewed suggestions for further changes in the proposed reclassification of the membership. The recommendations of the Council for amending the Statutes in connection with the classification will be published in the announcement of the May meeting, at which meeting they will be brought up for action.

Recently elected Fellows were introduced as follows: Arthur Francis Buddington (II:1) by H. E. McKinstry; Yuen Ren Chao (IV:3) by T. Starck; George Frisbie Whicher (IV:4) by G. Scatchard.

The following communication was presented:

Francis B. Sayre: The Problem of Underdeveloped Areas in Asia and Africa.

The meeting was dissolved at 10:15 P.M.

May 14, 1952 - Annual Meeting

The One Thousand Three Hundred and Fifty-ninth Meeting of the Academy convened in its House on May 14, 1952, and was called to order by the President at 8:25 P.M.

There were present forty-six Fellows and fifty guests.

The records of the Meeting of April 9 were read and approved. It was voted to amend the Statutes, as follows:

1. Amend Chap. II, Art. 1, to read:

ARTICLE 1. The Academy shall consist of Fellows, elected from the citizens or residents of the United States of America, Fellows Emeriti, and Foreign Honorary Members. They are arranged in four Classes, according to the Arts and Sciences in which they are severally proficient. Each Class shall be divided into the several Sections shown in the following table.

#### CLASS I. MATHEMATICAL AND PHYSICAL SCIENCES

Section 1. Mathematics

2. Physics

3. Chemistry

4. Astronomy

5. Earth Sciences1

6. Engineering Sciences and Technologies

#### CLASS II. BIOLOGICAL SCIENCES

Section 1. Biophysics and Biochemistry<sup>2</sup>

2. Botany and Bacteriology

3. Zoology3

4. Physiology and Experimental Psychology

5. Medicine4

#### CLASS III. SOCIAL ARTS AND SCIENCES

Section 1. Social Relations<sup>5</sup>

2. Economics

3. Political Science

4. Law

5. Administration and Affairs6

<sup>&</sup>lt;sup>1</sup> Including geology, geography, mineralogy, meteorology, and oceanography, etc.
<sup>2</sup> Including pharmacology, etc.
<sup>3</sup> Including phasical anthropology, etc.
<sup>4</sup> Including surgery and psychiatry, etc.
<sup>5</sup> Including human geography and cultural anthropology, clinical and social psychology, etc. chology, etc.
6 Including diplomacy, etc.

#### CLASS IV. HUMANITIES

Section 1. Philosophy and Theology

2. History and Archaeology

3. Philology and Criticism7

4. Fine Arts and Belles Lettres

# 2. Amend Chap. II, Art. 2, paragraph 1, to read:

ARTICLE 2. The number of Fellows shall not exceed one thousand, of whom not more than two-thirds shall be residents of New England. The number of Fellows in the four Classes, I through IV, shall be approximately in the ratio of 6:5:5:4, respectively.

#### 3. Amend Chap. IV, Art. 1, paragraph 2, to read:

There shall be also 20 Councillors, one for each Section of each Class; at each Annual Meeting 5 Councillors shall be elected by ballot to serve for a term of four years, and they shall take office at the close of that meeting and shall hold office until others are duly chosen and take office. The same Fellow shall not be eligible for two successive terms.

The annual reports were presented and accepted. New members and officers and committees were elected. These reports and elections are printed below.

The following communication was presented:

G. Wallace Woodworth, assisted by the Harvard Glee Club and the Radcliffe Choral Society: Words and Music.

The meeting was dissolved at 10:15 P.M.

HENRY B. PHILLIPS, Secretary

#### ANNUAL REPORTS

1951 - 1952

# Report on Deaths, Resignations, and the Status of the Membership 1951-1952

I regret to have to report the following deaths: Twenty-eight Fellows and two Fellows Emeriti—Michael Joseph Ahern, S.J. (IV:1), Edwin Montefiore Borchard (III:2), Joseph Perkins Chamberlain (III:2), George Henry Chase (FE IV:2), Henry Asbury Christian (II:4), Clive Day (III:3), Henry Sturgis Dennison (III:4), John Dickinson (III:1), John Erskine (IV:4), Clark Leonard Hull (IV:1), James Robertson Jack (I:4), Dugald Caleb Jackson (I:4), Lewis Jerome Johnson (I:4), Carl Otto Lampland (I:1), Morris Evans Leeds (III:4), Frederic Thomas Lewis (II:3), Ralph

<sup>7</sup> Including linguistics, literary and art scholarship, etc.

Stayner Lillie (II:3), Roswell Cheney McCrea (III:3), Edward Leyburn Moreland (I:4), William de Berniere MacNider (II:4), James Lee Peters (II:3), Anthony John Philpott (IV:4), Charles Lane Poor (I:1), Martin André Rosanoff (I:3), John Sloan (IV:4), Donald Charles Stockbarger (I:2), Thomas Wayland Vaughan (II:1), Karl Viëtor (IV:4), Edmund Allen Whitman (FE III:1), John Zeleny (I:2); Six Foreign Honorary Members—René Maunier (III:3), Kingo Miyabe (II:2), Serge Koussevitzky (IV:4), Hanns Oertel (IV:3), Charles Scott Sherrington (II:4), Nevil Vincent Sidgwick (I:3).

Four Fellows have been classed as Emeriti: Giuseppe Antonio Borgese (IV:3), William Carter Quinby (II:4), George Sarton (IV:2), Martin Wagner (IV:4).

Four Fellows have resigned: Luther Harris Evans (IV:4), Ralph Linton (IV:2), Isidor Isaac Rabi (I:2), Thomas Walter Swan (III:1).

In May, 1951, fifty-eight Fellows and five Foreign Honorary Members were elected to the Academy; all except seven accepted election.

The roll now includes 911 Fellows, 58 Fellows Emeriti, and 142 Foreign Honorary Members (exclusive of those to be elected tonight).

Respectfully submitted,

May 14, 1952

HENRY B. PHILLIPS, Secretary

#### Report of the Treasurer

The Treasurer presented his usual full report in print, which Fellows may obtain on application to him. The following tables give Receipts and Expenditures for the fiscal year ending March 31, 1952.

#### RECEIPTS

\$22,840.79	
4,257.85	
8,506.00	\$35,604.64
	124.00
	4,104.40
	2,025.00
	111.60
	200.00

Permanent Science Fund:		
Boston Safe Deposit and Trust Co., Trustee	\$15,000.00	
Return of Grants	1,504.58	
Investment Income	744.00	17,248.58
Publications Committee:		
Investment Income	\$ 3,385,20	
Sale of Publications	1,170.53	
Lake Publications	199.01	4,754.74
Rockefeller Foundation Fund:		
Institute for the Unity of Science		3,000.00
Rumford Fund Committee:		
Investment Income	\$ 5,217.30	
Return of Grants	310.00	
Sale of Publications	40.00	5,567.30
Special Endowment Fund:		
Investment Income		12.40
Warren Fund Committee:		
Investment Income		1,221.40
Total	• • • • • • • • • • • • • • • • • • • •	\$73,974.06
Expenditures		
Academy, General:		
Salaries and Pensions, etc.	\$13,205.24	
Meetings and General Administration	7,012.60	
House Maintenance	9,643.70	
President's Expense	181.82	
Treasurer's Expense	709.15	
Special Appropriations:	100.10	
School Science Fund	598.37	
Committee on International Relations	270.26	\$31,621.14
Committee on International Relations		φο1,021.11
Transfer to Current Expense Fund		3,983.50
		\$35,604.64
Mabel S. Agassiz Fund:		
For Meetings		124.00
Amory Fund:		
Expense	***********	85.11
Institute for the Unity of Science		4,654.70

Permanent Science Fund: Grants	\$24,315,00	
Expense	341.54	24,656.54
Publications Committee:		
Bulletin	\$ 1,382.10	
Proceedings	6,475.63	
Miscellaneous	17.74	7,875.47
Rumford Fund Committee:		
Award	\$ 500.00	
Medal	750.60	
Expense	2,673.87	3,924.47
Total		\$76,924.93

Respectfully submitted,

May 14, 1952

HORACE S. FORD, Treasurer

# Report of the House Committee

The Academy used the House forty-seven times for its own meetings during the past year, with an average attendance of forty-one per meeting. Besides the eight stated meetings of the Academy, there were thirty-nine meetings of various committees and conferences under the auspices of the Academy. A total of thirty-two other scientific or cultural guest organizations held 165 meetings in the House, with an average attendance of seventy-six. It is estimated that the total attendance at meetings and exhibits for the year was about 15,900. The table below lists the various guest organizations and the number of meetings held by each.

		N	o. of	Meetings
Alliance Française (one meeting with Salon Française	ais)			7
Alpha Omega Fraternity, Tufts Dental School				5
Alpha Phi Sorority (Graduates of Salem Teachers C	olle	ge)		1
Backus Historical Society				1
Boston Authors Club				12
Boston Psychoanalytic Society and Institute				9
Boston Shakespeare Club				1
Boston Society of Civil Engineers				5
Boston Teachers Union				12
Brookline Bird Club				2
Children's Museum Trustees				3
China Students' Club				8

Colonial Dames	2
Dynamion Society	17
French Center of New England	8
French Consulate	2
French Library in Boston	1
Green Mountain College Alumni	1
High School Women's Club of Boston	2
Institute of Contemporary Art	8
Joyce Kilmer Post, American Legion and Auxiliary, etc	25
Massachusetts General Hospital Symposium	2
Mediaeval Academy	2
New England Botanical Club	9
New England Section, Optical Society of America	6
New England Woman's Press Association	6
Pan American Society of New England	1
Polish Literature Club	1
Rhodes Scholarship Committee (Mass. and New England)	2
Salon Français	1
Society for Preservation of Antiques	2
United Prison Association of Massachusetts	1
	165

The next table below gives the titles of the exhibits held in the lobby and the period during which they were displayed. It is estimated that about 1,500 entered the House solely to view the exhibits.

Twenty-seven Presidents of the Academy, portraits. October.

Lost Architectural Masterpieces Regained, Reconstruction Studies, by Kenneth Conant. October.

One Hundred Color Transparencies of Masterpieces from the Louvre. November 5 to 30.

Benjamin Franklin and the Science of His Time. December and January. Exhibit of Activities of the Academy and of the Committee on International Scientific Publication. February and March.

Prisons. April.

Synthetic Elements. April and May.

The Lowell Institute Cooperative Broadcasting Council, whose office had been in the large room (1,164 sq. ft.) on the fourth floor of the building since the beginning of their organization in 1947, moved to larger quarters in Symphony Hall in October, 1951. This space still remains available for use. The Committee on International Scientific Publication continued to use the smaller office (570 sq. ft.) on the fourth floor, and the Academy offices continued on the first floor. The Boston Museum of Science and the Boston Authors Club continued to share space with us in the book-stack wing.

The costs of maintaining and operating the House are given in the table below:

Expenditures	1950-1951	1951-1952
Custodian, Assistance, Pensions	\$ 3,548.75	\$ 3,753.93
Coal	1,343.01	1,202.60
Gas	23.13	3.10
Electricity	1,385.20	1,377.21
Elevator	933.83	1,489.50
Water	25.50	25.50
Equipment	750.45	618.42
Supplies	591.01	428.30
Alterations and Repairs	1,582.78	757.25
Fire Insurance	594.62	520.05
Miscellaneous	55.00	67.84
Total	\$10,833.28	\$10,243.70
Appropriations (including pension)	12,085.00	11,875.00
Unexpended	\$ 1,251.72	\$ 1,631.30

Receipts for use of the facilities of the House by other scientific, educational, and cultural organizations reduced the net cost to the Academy as follows:

	1950-1951	1951-1952
Total operating expenditures	\$10,833.28	\$10,243.70
Receipts for the year	4,100.56	4,257.85
Net cost of House Maintenance and		
Operation to the Academy	\$ 6,732.72	\$ 5,985.85

During the year we purchased a Bell and Howell, 16 mm. sound, motion picture projector and an American Optical, Delineascope, for projecting 2 x 2 slides and 35 mm. film strips. These are made available, along with our standard slide projector, to guest organizations using the Lecture Hall. Spring door closers and new interlocks were installed on each of the five floors of the elevator well, as well as closer for the gate of the elevator car. On July 1 we instituted a maintenance contract with the Otis Elevator Company. The fire escape on the rear of the House was painted.

Respectfully submitted,

May 14, 1952

CHESTER M. ALTER, Chairman

# Report of the Committee on Publication

The Committee held one formal meeting during the year. The rest of the business was conducted by correspondence and telephone.

No further numbers of the *Memoirs* were published during the year. Volume 79 of the *Proceedings* was completed with the Summer Number in August, 1951. It contains 356 pages as compared with 272 pages of Volume 78.

In accordance with the agreement reached last year with the Institute for the Unity of Science (Proceedings, Volume 79, page 345), Volume 80 started publication "in co-operation with the Institute for the Unity of Science." Number 1, dated July, but distributed in the fall, was sent to all Fellows. The second number is in page proof and should be distributed in June. One or two more numbers will follow in 1952, bringing the total number of pages to 400. Volume 81 of the Proceedings is running concurrently with this. Six numbers have appeared and the volume will be completed with the Summer Number. This volume contains two papers that were presented at meetings of the Academy: The Rumford Medal Lecture by Herbert E. Ives and the communication of Francis B. Sayre, presented before the Academy at the April meeting. These papers are, therefore, really "Proceedings" in the sense in which the term was originally understood.

The Bulletin, under the direction of Mr. Burhoe, has been issued eight times, and, as usual, carried notices and abstracts of the communications presented at the meetings, except for the two which were printed in their entirety in the Proceedings.

The Committee on Publication received for the year \$1,369.54 from sales of publications, and \$3,385.20 from investment income, a total of \$4,754.74. It received in addition from the Rumford Committee \$2,653.30 to pay the cost of printing The Sun in the Service of Man. Expenses for the year, not counting the number of the Proceedings paid for by the Rumford Committee, were \$7,875.47. The total expenses were actually \$10,528.77, and the total receipts \$7,408.04, showing an excess of outlay totaling \$3,120.73. This deficit was charged against the credit balance which has shrunk further from \$11,809.76 on March 31, 1951 to \$8,689.03. Of this balance, \$1,409.04 belongs to the Lake Fund. At the present rate this reserve will be exhausted by March 31, 1954.

There is now in type the first number of a series of Slavić Studies, edited by two Fellows of the Academy, Roman Jakobson and Michael Karpovich. This series, the costs of which will be underwritten by a special fund to support Slavic Studies, the Reisinger Fund, will appear as a special series at the rate of two or three numbers a year. The October number of the Bulletin will carry a full announcement.

The publication policy of the Committee is at present governed by the vote of April 11, 1951, which was printed in last year's report. At that time the Editor requested suggestions and comments on this program. None has been received. The policy of the Committee is naturally controlled by the present high costs of printing. No special publications can be financed on the present regular income from sales and investment. Consequently, the eleventh

volume of the *Dated Greek Manuscripts*, which is ready, cannot be produced until the balance in the Lake Fund, \$1,409.04, is augmented by gifts or special appropriations.

Respectfully submitted,

May 14, 1952

TAYLOR STARCK, Chairman

# Report of the Permanent Science Fund Committee

At our October meeting we had 15 applications to consider, totaling requests for \$18,330, of which 9 were acted upon favorably involving grant awards of \$9,065. Six of the applications were declined.

In March, 13 applications requesting a total of \$13,042 were presented for consideration. The 1951-1952 income of the Fund was \$16,504 but, with our reserve, \$24,399 was available as of March 1, 1952. Of the 13 applications, 3 were declined and 10 were approved, for a total amount of \$8,405.

Reports of the specific grants to individuals were made to the Council of the Academy on October 10, 1951 and on March 10, 1952, as follows:

#### Grants Approved October 10, 1951

1. To Mark D. Altschule, M.D., Assistant Professor of Medicine, Harvard Medical School; Director of Internal Medicine and of Research in Clinical Physiology, McLean Hospital, Waverley 79, Massachusetts, for an investigation of intermediary carbohydrate metabolism in mental disorders, \$1,500.

2. To Henry N. Andrews, Jr., Professor of Botany, Washington University Botany School, St. Louis 5, Missouri, for studies of the petrified

carboniferous plants of the central American coal fields, \$500.

3. To Benjamin Karpman, M.D., Chief Psychotherapist, Saint Elizabeths Hospital, Washington, D. C., for studies in the psychogenetics of crime as a basis for more general study of psychodynamics of human behavior, \$1,000.

4. To Maynard Mosely, Assistant Professor of Botany, Santa Barbara College, University of California, Santa Barbara, California, for a study of the comparative anatomy and phylogeny of the Garryaceae, \$545.

 To Dr. Fritz Reder, Assistant, Physics Dept., University of Graz, Austria, for detection of gas impurities by microwave gas breakdown measurements. \$820.

6. To George H. Scherr, Assistant Professor, The Creighton University School of Medicine, Department of Microbiology, Omaha, Nebraska, for a study of the effect of gonadotropic hormones on systemic histoplasmosis in mice, \$1,000.

7. To Oswald H. Robertson, Lecturer in Biology, Department of Biological Sciences, Stanford University, California, for a study of the cause of death of the Pacific Salmon following spawning, \$1,200.

8. To Charmion Shelby, Assistant Editor, Handbook of Latin American Studies, Hispanic Foundation, Library of Congress, Washington, D. C., for the editing of her English translation of Garcilaso de la Vega's La Florida del Inca, for publication by the Hakluyt Society in 1953 or 1954, \$1,000.

9. To Hans H. Zinsser, M.D., Assistant Clinical Professor, Dept. of Surgery, U. S. C. Medical School, Los Angeles, California, for the isolation and inhibition of bacterial urease from organisms of urological importance, \$1,500.

#### Grants Approved March 10, 1952

 To Edgar Altenburg, Associate Professor of Biology, The Rice Institute, Houston, Texas, for an investigation of the influence of ultraviolet light on mutagenesis in *Drosophila*, \$1,500.

2. To Robert H. Cole, Professor of Chemistry, Metcalf Research Laboratory, Brown University, Providence, Rhode Island, for further work on high field conductances of paraffin chain electrolytes in water and other polar solvents, \$850.

To A. Hunter Dupree, Assistant Professor of History, Texas Technological College, Lubbock, Texas, for a biography of Asa Gray, \$1,000.

4. To Rose Frisch, Laboratory Assistant, Harvard University, Cambridge, Massachusetts, for studies of the transformation of mutant *Drosophila* larvae to wild type phenotype by their feeding on wild type pupae, \$750.

 To Reginald Ruggles Gates, Emeritus Professor, University of London, Harvard University, Cambridge, Massachusetts, for studies of skin color inheritance, \$155.

6. To C. Clayton Hoff, Associate Professor of Biology, University of New Mexico, Albuquerque, New Mexico, for studies on the pseudoscorpions of New Mexico, \$400.

7. To Hallam L. Movius, Jr., Associate Professor, Harvard University, Cambridge, Massachusetts, for a study of the origin, development, chronology, and affinities of the Palaeolithic cultures of the territories of the U. S. S. R., \$750.

8. To George R. Rumney, Assistant Professor of Geography, University of Connecticut, Storrs, Connecticut, for a determination, from the latest statistical data, of trends and probable outcome of settlement expansion in the relatively inhospitable region of the Canadian Shield, \$1,000.

9. To Harry Sobotka, Chemist to The Mount Sinai Hospital, New York 29, New York, for an investigation of the monomolecular film techniques for microanalyses, especially of keto-steroids, \$1,500.

10. To Robert E. Woodson, Jr., Curator of Herbarium, Missouri Botanical Garden, St. Louis 10, Missouri, for a biometrical analysis of natural selection in *Asclepias tuberosa* L. (Butterflyweed), \$500.

Respectfully submitted,

May 14, 1952

HUDSON HOAGLAND, Chairman

#### Report of the Rumford Committee

In early September, 1951, the Academy published the 146-page issue of its *Proceedings* (Vol. 79, No. 4) containing the papers presented at the Conference on the Sun in the Service of Man, arranged and supported by the Rumford Committee. To cover the cost of the publication, \$2,653.30 of the

Rumford Fund was appropriated. On May 9 and 10, 1952, the Academy held at its House a "Symposium on Climatic Change," supported by \$1,000 from the Rumford Fund. About 80 invited conferees participated in the discussion of some 20 papers collating evidence from several sciences concerning the facts and explanatory hypotheses of climatic change in the history of the planet. These papers are to be published by the Academy.

On November 14, 1951, the 1951 Rumford Medal was presented to Dr. Herbert E. Ives, of Montclair, New Jersey, for his noteworthy contributions to optics. His acceptance address to the Academy was published as a special issue of the *Proceedings*, Vol. 81, No. 1, with the expectation that it would inaugurate a continuing series of biennial Rumford Medal Lectures.

In October, 1951, a grant of \$500 was made from the Rumford Fund to Professor Forrest F. Cleveland, Department of Physics, Illinois Institute of Technology, Chicago, in support of his researches on Raman and infrared spectral data, assignments, force constants, and thermodynamic properties of substituted methanes and ethanes.

Plans for the celebration of the bicentennial of the birth of Rumford were developed. A committee on the celebration was established and \$1,000 from the Fund was appropriated in April, 1952, for the preparation under the direction of Professor Sanborn Brown of an exhibit of models of Rumford's philosophical apparatus.

The Treasurer reports that the unexpended income of the Rumford Fund, as of March 31, 1952, was \$27,130.94.

Respectfully submitted,

May 14, 1952

HARLOW SHAPLEY, Chairman

#### Report of the Cyrus M. Warren Committee

The Committee had available for grants the sum of fifteen hundred dollars, which amount had been voted by the Council at the meeting on March 14, 1951. The Committee met on May 8, 1951, for consideration of the applications that had been received. Due to an inaccurately printed notification in Science regarding the Fund, all applications had been presented for amounts much larger than the Fund permitted. Therefore, after due consideration by the Committee, it was voted not to use the appropriation for 1951-52, but to hold the amount for use together with the appropriation for 1952-53.

A report has been received from Professor John D. Spikes, University of Utah, indicating the disposition of a grant of \$150 in 1950. Professor Spikes reports that the equipment obtained is in constant use, and further reports will be made when published results are available.

Reports of progress in his research have been received from Professor A. J. Castro of San José State College, who received a grant of \$55 in 1950. Reprints have been received as follows:

From G. R. Seaman: "Enzyme Systems in Tetrahymena Geleii S. II. Acetylcholinesterase Activity. Its Relation to Motility of the Organism and to Coordinated Ciliary Action in General." by G. R. Seaman and R. K. Houlihan. Jour. Cellular and Comparative Physiology, 37, 309 (1951). From E. C. Gilbert: "Heats of Combustion of Some Isomeric Nitrostilbenes." by C. M. Anderson, L. G. Cole, and E. C. Gilbert. J. Am. Chem. Soc., 72, 1263 (1950).

Respectfully submitted,

May 14, 1952

FREDERICK G. KEYES, Chairman

# Report of the Amory Prize Committee

The Committee on the Amory Prize met on November 21, 1951, with all 7 members and the Executive Officer present. It was noted that the Kretschmeyer Foundation of Chicago had recently been set up to operate in the same field as that of the Amory Committee, and it was resolved to keep in touch with that foundation. Further names for consideration in connection with the next award were added to the list. The policy of dividing the award between a number of persons (4 for the septennium ending November 10, 1940, and 6 for that ending in 1947) was discussed, as was the policy of repeating awards to earlier recipients who had continued to obtain notable results. One of the most serious questions before the Committee as the time for new awards approaches will be how to obtain the best nominations; previous efforts to attract well-considered nominations from outside the Committee have not been very successful.

Respectfully submitted,

May 14, 1952

EDWIN B. WILSON, Chairman

# OFFICERS AND COMMITTEES ELECTED MAY 14, 1952

For a complete list of officers and committees see the first pages of this issue.

President ... Edwin H. Land
Vice-President for Class I ... Jerome C. Hunsaker
Vice-President for Class II ... Alfred S. Romer
Vice-President for Class III ... Erwin D. Canham
Vice-President for Class IV ... Wallace Goodrich
Secretary ... Henry B. Phillips
Treasurer ... Horace S. Ford
Librarian ... Ernest H. Huntress
Editor ... Taylor Starck

#### Councillors

To serve for four years:

John T. Edsall, of Class I Francis M. Rackemann, of Class II

Chester M. Alter, of Class III Hugh Hencken, of Class IV

#### House Committee

John B. Wilbur.....to serve for one year, and as Chairman Philippe E. LeCorbeiller ......to serve for two years Henry R. Viets ...... to serve for three years

#### Committee on Membership

To serve for two years:

Edward M. Purcell, of Class I Walter M. Whitehill, of Class III James M. Faulkner, of Class II Mason Hammond, of Class IV

#### Committee on Meetings

To serve for two years:

Bart J. Bok, of Class I Roy G. Hoskins, of Class II

# Committee on Finance

To serve for two years:

Thomas D. Cabot Auditing Committee

To serve for two years: Bishop C. Hunt

#### Committee on Publication

To serve for two years:

Philipp G. Frank, of Class I Frank M. Carpenter, of Class II

#### Permanent Science Fund Committee

To serve for three years:

John L. Oncley

Reed C. Rollins

Ralph Lowell

# Chester S. Keefer

### Rumford Committee George R. Harrison..... to serve for one year, and as Chairman Norman F. Ramsey ......to serve for three years George Wald ......to serve for three years

#### C. M. Warren Committee

To serve for three years:

Edwin R. Gilliland, Chairman

Robert H. Cole

#### Amory Prize Committee

To serve for one year:

Edwin B. Wilson, Chairman

William B. Castle Roy G. Hoskins Gregory Pincus

George W. Thorn George B. Wislocki S. Burt Wolbach

### Nominating Committee To serve for three years:

Harlow Shapley, of Class I, Chairman Robert B. Stewart, of Class III
Clifford Frondel, of Class II William F. Twaddell, of Class IV

# NEW MEMBERS ELECTED MAY 14, 1952

#### FELLOWS (84)

# CLASS I-MATHEMATICAL AND PHYSICAL SCIENCES (22)

#### Section 1-Mathematics and Astronomy (1)

Raphael Salem......Mass. Institute of Technology, Cambridge, Mass.

#### Section 2-Physics (5)

Bruce Hadley Billings.......Baird Associates, Cambridge, Mass. Richard Henry Bolt.....Mass. Institute of Technology, Cambridge, Mass. Henry Margenau......Yale University, New Haven, Conn. Wayne Buckles Nottingham

#### Section 3-Chemistry (9)

Halvor Niels Christensen......Tufts Medical School, Boston, Mass.

Lawrence Joseph Heidt...Mass. Institute of Technology, Cambridge, Mass.

Donald Frederick Hornig......Brown University, Providence, R. I.

John Withers Irvine, Jr...Mass. Institute of Technology, Cambridge, Mass.

Gilbert William King.....Arthur D. Little, Inc., Cambridge, Mass.

John Dombrowski Roberts..Mass. Institute of Technology, Cambridge, Mass.

Gerhard Schmidt......Tufts Medical School, Boston, Mass.

Arnold Max Seligman.....Harvard Medical School, Boston, Mass.

Cutler D. West......Polaroid Corporation, Cambridge, Mass.

#### Section 4—Technology and Engineering (7)

# CLASS II-NATURAL AND PHYSIOLOGICAL SCIENCES (21)

#### Section 1-Geology, Mineralogy, and Physics of the Globe (4)

Henry Garrett Houghton...Mass. Institute of Technology, Cambridge, Mass. Morris Morgan Leighton.....Illinois Geological Survey, Urbana, Illinois Raymond Cecil Moore.......University of Kansas, Lawrence, Kansas Hurd Curtis Willett.....Mass. Institute of Technology, Cambridge, Mass.

#### Section 2-Botany (4)

#### Section 3-Zoology and Physiology (9)

#### Section 4-Medicine and Surgery (4)

#### CLASS III-THE SOCIAL ARTS (22)

#### Section 1—Jurisprudence (1)

William Henry Hastie

U. S. Court of Appeals, Third Circuit, Philadelphia, Pa.

#### Section 2—Government, International Law and Diplomacy (7)

#### Section 3-Economics and Sociology (1)

#### Section 4-Administration and Affairs (13)

Harold Claude CaseBoston	University	, Boston,	Mass.
Margaret Clapp	College, 1	Wellesley,	Mass.
John Henshaw Crider		. Lincoln,	Mass.
David Dubinsky			

International Ladies Garment Workers Union, New York, N. Y.
Frank Porter Graham.......U. N. Representative to Kashmir
Jacob George Harrar.....Rockefeller Foundation, New York, N. Y.
Paul Gray Hoffman.....Ford Foundation, Pasadena, Calif.
Harrison Keller....New England Conservatory of Music, Boston, Mass.
Walter Philip Reuther

International Union, United Automobile, Aircraft, and Agricultural
Workers of America, C. I. O., Detroit, Mich.
Earl Place Stevenson......Arthur D. Little, Inc., Cambridge, Mass.

#### CLASS IV-THE HUMANITIES (19)

#### Section 1-Theology, Philosophy, and Psychology (4)

Irwin Edman	Columbia University, New York, N. Y.
Charles William Morris	Chicago University, Chicago, Ill.
Burrhus Frederic Skinner	Harvard University, Cambridge, Mass.
Hao Wang	Harvard University, Cambridge, Mass.

#### Section 2-History, Archaeology, and Anthropology (5)

I. Bernard Cohen	ss.
Hallam Leonard Movius, Jr	ss.
France Vinton Scholes University of New Mexico, Albuquerque, N. I	M.
Clifford Kenyon Shipton American Antiquarian Society, Worcester, Mas	ss.
Gordon Randolph Willey	ss.

#### Section 3—Philology (4)

Peter Boodberg	. California University, Berkeley, Calif.
John Peterson Elder	Harvard University, Cambridge, Mass.
George Sherman Lane	
Wolf Leslau	. Brandeis University, Waltham, Mass.

#### Section 4-The Fine Arts and Belles Lettres (6)

Alfred Hamilton Barr, JrMuseum of Modern Art, New York, N. Y.
Pietro BelluschiMass. Institute of Technology, Cambridge, Mass.
Gyorgy Kepes Mass. Institute of Technology, Cambridge, Mass.
Meyer Schapiro
Lionel Trilling
Elwyn Brooks White

#### FOREIGN HONORARY MEMBERS (7)

#### CLASS I

#### Section 2-Physics (2)

Cornelius Gorter......Kamerlingh Onnes Laboratory, Leiden, Netherlands Franz Eugen Simon......Oxford University, Oxford, England

#### CLASS II

#### Section 3-Zoology and Physiology (1)

Karl von Frisch.......Graz University, Graz, Austria

# Section 4-Medicine and Surgery (1)

James Bertram Collip

University of Western Ontario, London, Ontario, Canada

#### CLASS III

#### Section 4-Administration and Affairs (2)

#### CLASS IV

# Section 2-History, Archaeology, and Anthropology (1)

Alfonso Caso Andrade

National Institute of Anthropology and History, Mexico, D. F., Mexico

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